

DOCUMENT RESUME

ED 172 956

PS 010 742

AUTHOR Williams, Tannis MacBeth; And Others
TITLE The Development of Maternal Attachment: A Longitudinal Study.
PUB DATE Mar 79
NOTE 24p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (San Francisco, California, March 15-18, 1979)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Attachment Behavior; *Development; *Emotional Response; Infants; Longitudinal Studies; *Mothers; Neonates; Observation; *Parent Attitudes; *Parent Education; Research
IDENTIFIERS Caesarean Births; *Mother Infant Relationship; Self Reports

ABSTRACT

Summaries of papers presented in a symposium deal with a related series of four issues concerning the development of maternal attachment: Is maternal attachment best conceptualized and measured as an emotional tie or as observable behavior? Is there continuity in the development of maternal attachment from the prenatal to postpartum period? Can the development of maternal attachment be facilitated by teaching parents about their infant's capabilities and responses? What are the ramifications of caesarean versus vaginal delivery for the development of maternal attachment? Questionnaires covering eight areas of concern (e.g., confidence in caregiving, feelings toward pregnancy) were completed in the last trimester of pregnancy; birth information was obtained from hospital charts; and postpartum questionnaires analogous to the prenatal ones were completed at one month. Eighty-six mothers were randomly assigned to one of four groups which varied according to the number and content (teaching vs. no teaching) of home visits during the first month postpartum. Ainsworth Maternal Care Rating Scales were completed and one hour of mother-infant interaction was observed. Continuity in the development of maternal attachment from the prenatal to postpartum period was found, and there was some evidence that teaching parents about their infants may facilitate maternal attachment and behavior. Mode of delivery was not a significant variable. It was concluded that observation of maternal behavior may not provide a sufficient assessment of maternal attachment.
(Author/RH)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

Symposium presented at the biennial meeting of the Society for Research in
Child Development, San Francisco, March 1979

Title

THE DEVELOPMENT OF MATERNAL ATTACHMENT: A LONGITUDINAL STUDY

Chairperson

Tannis MacBeth Williams, Department of Psychology, University of British Columbia,
Vancouver, B.C., Canada V6T 1W5.

Participants

Tannis MacBeth Williams: Continuities and discontinuities related to the
development of maternal attachment.

Susan Lee Painter: The measurement of maternal attachment: Attachment versus
attachment behavior.

Sheena M. Davidson: An experiment in teaching parenting skills.

Lesley A. Joy: Ramifications of caesarean versus vaginal delivery for the
development of maternal attachment.

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Tannis M.
Williams

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

This research was funded by Health and Welfare Canada grant 6610-1125-46
to Tannis MacBeth Williams. We are very grateful to Susanna Neufeld, Lewis James,
Virginia Green, Todd Rogers, and the participating families and hospitals for
their assistance.

ED172956

PS 010742

Symposium Abstract

The Development of Maternal Attachment: A Longitudinal Study

The findings of a multifaceted interdisciplinary investigation of the development of maternal attachment will be described in this symposium. There has been considerable professional and public interest, and even controversy surrounding the topic of maternal attachment in recent years, but this is the first prospective investigation of maternal attachment over the prenatal to postpartum period. The papers to be presented in this symposium deal with a related series of four issues concerning the development of maternal attachment: Is maternal attachment best conceptualized and measured as an emotional tie or as observable behavior? Is there continuity in the development of maternal attachment from the prenatal to postpartum period? Can the development of maternal attachment be facilitated by teaching parents about their infant's capabilities and responses? What are the ramifications of caesarean versus vaginal delivery for the development of maternal attachment?

A total of 190 women participated in the research. Questionnaires covering eight areas of concern (e.g., confidence in caregiving, feelings toward pregnancy) were completed in the last trimester of pregnancy, birth information was obtained from hospital charts, and postpartum questionnaires analogous to the prenatal ones were completed at one month. A subsample of 86 mothers provided all of the above data and were in addition randomly assigned to one of four groups which varied according to the number and content (teaching vs no teaching) of home visits during the first month postpartum. Finally, the Ainsworth Maternal Care Rating Scales were completed and one hour of mother-infant interaction was observed at one month by a home visitor blind to the mother's group assignment.

In brief, continuity in the development of maternal attachment from the prenatal to postpartum period was found, and there was some evidence that teaching parents about their infants may facilitate the development of maternal attachment and behavior. There was little evidence of differences related to mode of delivery. It was concluded that observation of maternal behavior may not provide a sufficient assessment of maternal attachment.

Symposium Title: THE DEVELOPMENT OF MATERNAL ATTACHMENT: A LONGITUDINAL STUDY

Title of this Presentation: Continuities and Discontinuities Related to the
Development of Maternal Attachment

Author of this Presentation: Tannis MacBeth Williams

Author's Institution: Department of Psychology, University of British Columbia,
Slides will not be used.

Summary

One purpose of this project was to attempt to describe continuities and discontinuities characterizing the development of the mother-infant relationship from the prenatal to the early postpartum period. In particular, we asked whether there was evidence of continuity in the development of maternal attachment. More than 180 primiparous women completed prenatal questionnaires in their last trimester of pregnancy and postpartum questionnaires, designed to cover analogous areas of concern, at one month postpartum. These women, who were recruited at prenatal hospital tours, had a mean age of 27 years, a mean education level of almost 14 years, and had lived with their husband or partner for a mean of almost 4 years before the birth of this first baby.

Even this sample of relatively well-prepared mothers was characterized by considerable change. The matrix of responses to similar prenatal and postpartum questionnaire items showed much less continuity than had been expected. Many events which have been assumed to be quite important in prenatal adjustment to a new baby, such as whether or not the pregnancy was planned, experience in prenatal classes, and plans for labor and delivery, were unrelated to postpartum reports of experiences with and feelings toward the new baby. The expectant mothers' plans and arrangements for various aspects of child care, including plans for breastfeeding, and plans for stopping and/or resuming work outside the home were also unrelated to postpartum reports, as were events surrounding the infant's

birth, including time spent together in the first few hours and days after the birth.

In the midst of this evidence of discontinuity between the prenatal and postpartum periods were three constellations of items which formed an interesting pattern of relationships. These constellations dealt with attachment, confidence in caregiving ability, and emotional state or feelings. The picture over the prenatal-postpartum period seemed to be one of continuity of attachment, discontinuity of emotional state, and continuity of caregiving confidence, with prediction of confidence in caregiving also related to postpartum report of attachment and emotional state. And whereas attachment, confidence in caregiving and emotional state were not correlated prenatally, they were well correlated at one month postpartum.

Stepwise regression analyses were used to assess the degree to which postpartum reports of attachment, confidence in caregiving, and emotional feelings could be predicted from items in their own and the two other constellations assessed either prenatally or postpartum. For example, the mother's report at one month postpartum of how close she felt to her baby (one of the attachment items) had a set of 12 significant predictors: prenatal report of happiness, prediction of ability to calm her crying infant, prediction of how soon she would develop strong feelings for her infant and how soon her infant would develop strong feelings toward her, and postpartum report of how close the infant's father felt to the baby, how close the baby felt to her, how close the baby felt to its father, when she felt the baby was really hers, and how well she felt able to tell what the baby needed or wanted. This set of items accounted for a significant proportion (62%; $R^2 = .616$; $F = 15.52$, $df = 12, 116$, $p < .0001$) of the variance in postpartum report of mother-infant attachment.

In other stepwise regression analyses, prenatal and/or postpartum items dealing with attachment, confidence in caregiving, and emotional state accounted

for significant proportions of the variance in postpartum report of how close the mother thought the baby felt to her ($R^2 = .59$), how close the baby's father felt to the baby ($R^2 = .29$), how close the baby's father thought the baby felt to him ($R^2 = .48$), confidence in caregiving ($R^2 = .48$), when the mother felt the baby was really hers ($R^2 = .39$), how well she felt able to tell what the baby wanted or needed ($R^2 = .55$), how feeding was progressing ($R^2 = .38$), how easily she could quiet her crying/fussing baby ($R^2 = .42$), report of feeling relaxed vs anxious ($R^2 = .37$), happy vs unhappy ($R^2 = .46$) and score on the Schaefer Mannheim depression scale ($R^2 = .53$).

In sum, we found evidence of continuity from the prenatal to the early postpartum period in maternal report of attachment, and evidence that confidence in caregiving ability may play an important role in relation to maternal attachment and general postpartum emotional state.

Symposium Title: THE DEVELOPMENT OF MATERNAL ATTACHMENT: A LONGITUDINAL STUDY

Title of this Presentation: The Measurement of Maternal Attachment: Attachment
versus Attachment Behavior

Author of this Presentation: Susan Lee Painter

Author's Institution: Department of Psychology, University of British Columbia

Slides will not be used.

Summary

The previous paper discussed continuity of maternal attachment as measured by self-report. This paper addresses the question: How can maternal attachment best be measured? At one month postpartum, when it became possible to use observational measures, we used three approaches to study maternal attachment. Direct observation of mother-infant interaction and more subjective clinical ratings were compared with the previously described self-report measures. This aspect of the project was based upon the reawakened interest in the maternal side of the mother-infant relationship which has spawned attempts to detail various aspects of the mother-infant bond. The importance of the early postpartum period for the development of the mother-infant relationship has been emphasized, and several investigators have followed their mother-infant pairs through the child's preschool years in an effort to discover what effect these early moments may have upon the child's later cognitive and social development. An important time which has not received much attention in the existing literature is the later postpartum period, after mother and infant have returned home from the hospital, when in the absence of intervention on the part of hospital staff mother and infant begin to truly share their bond, learning to live together, adapting to one another's natures and demands. Behavior in this early context is an influential start in the interactive flow of adaptation which will continue throughout the mother-child relationship.

The subjects were 86 primiparous women whose mean age was 27 years, mean

education level was almost 14 years, and mean rating on the Hollingshead scale of socioeconomic status was 5. These women were observed at home with their infants at one month postpartum. The observation period of one hour included a feeding, caregiving routines and interactive behavior. The observational instrument devised for this research employed a time-sampling technique with fifteen-second recording intervals. Precoded observation sheets listed twenty-seven maternal and seven infant behaviors, and had space for writing in reciprocal interactive behavior. Interobserver agreement was .79 or above for all observational categories. To deal with the problem of quantity versus quality of behavior, a two-level system of analysis was determined a priori, in which individual, molecular behaviors were grouped under global, more molar Composites, e.g., the Composite "Play Engagement" included the discrete, observable behaviors: smile, play w/ or w/o an object, make a "play-face". After each observation, the observer filled out a set of eighteen Maternal Care Rating Scales devised by Ainsworth which provided more subjective, clinical judgments of maternal caregiving and attachment behavior. The mothers also completed the prenatal and postpartum questionnaires described previously.

Global Composites of maternal behaviors were intercorrelated in a pattern which defined two major modes of maternal functioning: interaction and caregiving. The clinical judgments of the Maternal Care Ratings were highly intercorrelated (mean $r = .68$, $p < .01$), and were also correlated with some of the observational Composites, in particular Play Engagement ($\bar{X} r = .47$, $p < .001$), Reciprocal Interaction (maternal response contingent upon infant-initiated behavior) ($\bar{X} r = .34$, $p < .01$), and Visual Engagement and Vocal Engagement ($\bar{X} r = .34$, $p < .01$ and $.41$, $p < .001$, respectively). The ratings were not related to observed caregiving behavior. Observed maternal behavior was related to neither prenatal nor postpartum self-report of parent-infant attachment, nor was it related to prenatal or

postpartum items designed to assess confidence in caregiving.

The lack of relationship found between observed maternal attachment behavior (direct observation and clinical ratings) and self-reported feelings of attachment highlights the current controversy concerning the distinction between attachment as an emotional tie and attachment behavior. The present findings indicate that, in the least, a clear distinction between these two approaches to the study of attachment must be made. In our opinion, if one wishes to study maternal attachment it would be unwise to ignore the mother's report of her feelings toward her infant. The present findings also have implications for the study of infant attachment, which cannot be assessed through self-report but can only be inferred from observable behavior.

Symposium Title: THE DEVELOPMENT OF MATERNAL ATTACHMENT: A LONGITUDINAL STUDY

Title of this Presentation: An Experiment in Teaching Parenting Skills

Author of this Presentation: Sheena M. Davidson

Author's Institution: School of Nursing, University of British Columbia

Slides will not be used.

Summary

Programs for new parents have tended to focus on preparation for the birth experience rather than caring for a new baby. In one facet of this project we asked whether a program to help primiparous parents learn about the behavior patterns of newborns in general and about their own infant in particular would facilitate the development of maternal attachment and behavior.

Each participant in this part of the project was randomly assigned to one of four conditions, including two experimental groups involved in teaching sessions (Follow-Through, $n = 15$; Experimental, $n = 17$) and two control groups receiving no teaching (Placebo, $n = 19$; Control, $n = 35$). These groups did not differ on the demographic variables assessed (maternal and paternal age, education, and occupational status; length of common residence). Women who had a complicated postpartum course or were separated from their infant for more than 72 hours following the birth were not included in the final sample ($n = 86$).

The four conditions varied according to the number and content of home visits made during the first postpartum month. Families (mother, father, infant) in the Follow-Through, Experimental and Placebo groups received an evening visit from a nurse about 12 days postpartum, during which the birth and hospital experience were discussed, and questions were answered. Placebo visits were limited to these topics. For experimental and follow-through parents, a teaching session about infant behaviors was also included. It had three components: information about the general behavioral patterns of newborns; discussion and demonstration (based on the Brazelton Neonatal

Assessment Scale) of their own infant's response patterns; and discussion of how the parents could best respond to these individual patterns. The follow-through group had two additional (weekly) home visits during which infant behaviors and parent-infant interaction were discussed further. All four groups received a home visit at one month postpartum during which an hour of mother-infant interaction was recorded by an observer who was unaware of the family's group assignment. The observer also completed the Ainsworth Maternal Care Rating scales. Finally, each mother completed a set of postpartum questionnaires just prior to this one month observation.

When the data for the two experimental groups were compared with results for the two control groups, there were no significant differences in responses to prenatal items, with the exception that control mothers predicted they would develop a strong feeling for their infant sooner than experimentals ($p < .06$). In other words, it is unlikely that the postpartum differences obtained were due to pre-existing group differences. On the postpartum questionnaires, mothers participating in teaching sessions reported developing a strong feeling for their infants sooner than controls ($p < .04$); described their babies as having changed more since birth ($p < .001$), reported they found it easier to quiet their crying infants ($p < .05$), described themselves as more relaxed ($p < .06$), and obtained lower (better) scores on the negative ($p < .02$) and ignore ($p < .06$) scales of the Schaefer-Mannheimer Postnatal Research Inventory. In addition, experimental mothers were blindly rated (on the Ainsworth scale) by the observer at one month as providing a more stimulating environment for their infants ($p < .02$). During the hour-long observation of mother-infant interaction, experimental mothers more often engaged in auditory stimulation ($p < .02$), caretaking ($p < .01$), imitation ($p < .06$), and made more "play faces" ($p < .05$).

That there were some significant postpartum differences favoring participants in the teaching sessions was encouraging, but perhaps not as impressive as we would have liked. Based on the preliminary finding of E. Waters and his colleagues (personal

communication) that very small early differences are magnified by about 18 months, we examined our data more closely for patterns of results which may have been merely highlighted by statistical significance. We looked to see whether means for questionnaire items covering the areas of attachment, competence in caregiving, and emotional state favored the experimental (combined) or control (combined) groups, regardless of the magnitude of the difference. For the 18 prenatal variables covering these three areas the differences were not systematic; 8 favored the experimental group and 10 the controls. However, at one month postpartum, the experimental self-report mean was more positive for 23 of the 27 items covering the same areas. Furthermore, the mean experimental rating by the observer was higher than that for controls on 15 of the 18 Ainsworth scales, and experimental mothers displayed more of the behaviors comprising 8 of the 9 composites in the observational coding system. Thus there was a consistent pattern of findings suggesting that teaching sessions may have helped facilitate the developing relationship between mothers and their first babies, although the differences were not substantial. However, given this relatively advantaged sample of parents (i.e., 14 years of education, and more than 80% attendance at prenatal classes), and given the finding reported earlier in this symposium that prenatal and postpartum confidence in caregiving are importantly related to postpartum emotional state and to attachment, the findings are encouraging. They suggest that parents do benefit from teaching about their infants. Further research in this area seems warranted.

Symposium Title: THE DEVELOPMENT OF MATERNAL ATTACHMENT: A LONGITUDINAL STUDY

Title of this Presentation: Ramifications of Caesarean versus Vaginal Delivery
for the Development of Maternal Attachment

Author of this Presentation: Lesley A. Joy

Author's Institution: Department of Psychology, Simon Fraser University.

Slides will not be used.

Summary

There has been considerable recent interest in the medical and psychological ramifications of having a caesarean versus a vaginal delivery. With the increasing incidence of caesarean births in North America there has developed a hotly debated controversy over the medical necessity of performing so many caesarean sections (e.g., following the publication of Enkin, 1977). A major aspect of this controversy has to do with the implications of type of delivery for the development of maternal attachment, based in large part upon Klaus and Kennell's work (e.g., 1976). Our prospective investigation afforded an excellent opportunity to examine this issue.

There were 189 women in our total sample who completed questionnaires in the last trimester of pregnancy and at one month postpartum, for whom we had information about delivery: 40 were caesarean sections (21.98%). In our subsample of 86 women who participated in the teaching experiment and for whom we had Ainsworth Maternal Care Ratings and observation of mother-infant interaction at one month, 16 (19.75%) had caesarean deliveries.

A comparison of the vaginal and caesarean delivery groups revealed very few statistically significant differences, other than those dealing with the delivery itself (e.g., number of days in hospital). Women who subsequently had caesarean deliveries reported themselves as happier prenatally ($p < .02$), and were less concerned prenatally about spoiling their babies ($p < .04$). At one month

postpartum there was a marginally significant tendency for mothers who had had caesareans to describe themselves as more depressed ($p < .06$). They took longer to get back on their feet, as indicated by the convalescence scale of the Schaefer-Mannheimer Postnatal Research Inventory ($p < .02$). Finally, they were rated marginally higher on the acceptance scale of the Ainsworth Maternal Care Ratings ($p < .06$). As had been done for the experimental and control groups of the parent teaching study described in the previous paper, we looked to see whether means for questionnaire items covering the areas of attachment, competence in caregiving, and emotional state favored the caesarean or vaginal delivery groups, regardless of the magnitude of the difference. Unlike the case in that previous paper, the direction of differences was not systematic in either the prenatal or the postpartum period. The vaginal group was favored prenatally in 7 of 18 items, and postpartum, in 14 of 27. In addition, only 7/18 postpartum differences in the Ainsworth Maternal Care Ratings and 5/9 differences in observed maternal behavior favored the vaginal group.

The finding that even at one month postpartum, women who had had caesarean deliveries tended to describe themselves as more depressed may be worth pursuing. This finding was only marginally significant ($p < .06$) in the larger sample, and not significant in our subsample of 86 ($p < .15$). However, a similar finding was obtained by Bradley (1977). In both of these studies virtually all of the subjects had attended prenatal classes, and these classes prepared women fairly exclusively for vaginal deliveries. Anecdotal evidence from conversations with the mothers led us to wonder whether the finding of greater reported postpartum depression might not be related to disappointment at not having achieved a vaginal delivery. Given that about 20% of women are having caesarean deliveries, and most of these are unplanned, it may be important for prenatal classes to prepare parents for this possibility.

We must be cautious in drawing conclusions from this research about the implications of mode of delivery for the development of maternal attachment. The women studied were, as stated previously, relatively advantaged. Perhaps more importantly, they delivered in two comparable hospitals in a metropolitan center (Vancouver, B.C., Canada) where medical services are provided at little or no cost. (There is a token charge of \$4/day for hospitalization, and a small insurance premium to cover all other medical expenses, including physicians' fees; virtually everyone has such insurance.) One could not necessarily conclude that the lack of medical and other complications of caesarean births found in this study would hold true in other circumstances. On the other hand, while the hospitals in which the deliveries occurred were medically sound, they were not particularly progressive about birthing. None of the women who had a caesarean delivery had someone (spouse, partner, friend) with them, whereas most of the women with vaginal deliveries did so. Almost all caesarean were done under general anesthesia, and all of the caesarean infants were taken to the intensive care nursery immediately following the delivery. In contrast, few vaginal deliveries were done under a general anaesthetic, most parents spent some time with the infant immediately following the birth, and infants delivered vaginally were returned to their mothers sooner and for a longer period than infants delivered abdominally. In sum, the findings reported in this paper do not support the notion that caesarean deliveries are problematic by comparison with vaginal deliveries for the development of maternal attachment and maternal behavior.

Bradley, C. The effects of hospital experience on postpartum feelings and attitudes of women. Unpublished doctoral dissertation, University of British Columbia, 1977.

Enkin, M. W. Having a section is having a baby. Birth and the Family Journal, 1977, 4, 99-102.

Klaus, M., & Kennell, J. Maternal-infant bonding. St. Louis: C.V. Mosby, 1976.

TABLE 1Design of the ResearchA. Last Trimester of Pregnancy

- questionnaires were completed by approximately 190 primiparous women, including the 86 expectant mothers comprising the "core" sample.

B. At Childbirth

- information about labour and delivery obtained from hospital charts of approximately 190 mothers (about 80% had vaginal and 20% had caesarean deliveries), including the core sample.

C. Twelve Days Postpartum

- 86 "core" mothers were involved in the experiment in teaching parenting skills.

Experimental group

1. Follow-through group (n = 15): family received the teaching visit at 12 days postpartum plus two follow-up visits.
2. Experimental one-visit group (n = 17): family received the teaching visit.

Control group

3. Placebo group (n = 19): family received a non-teaching visit.
4. Pure control group (n = 35): family received no visit at 12 days post partum.

D. One Month Postpartum

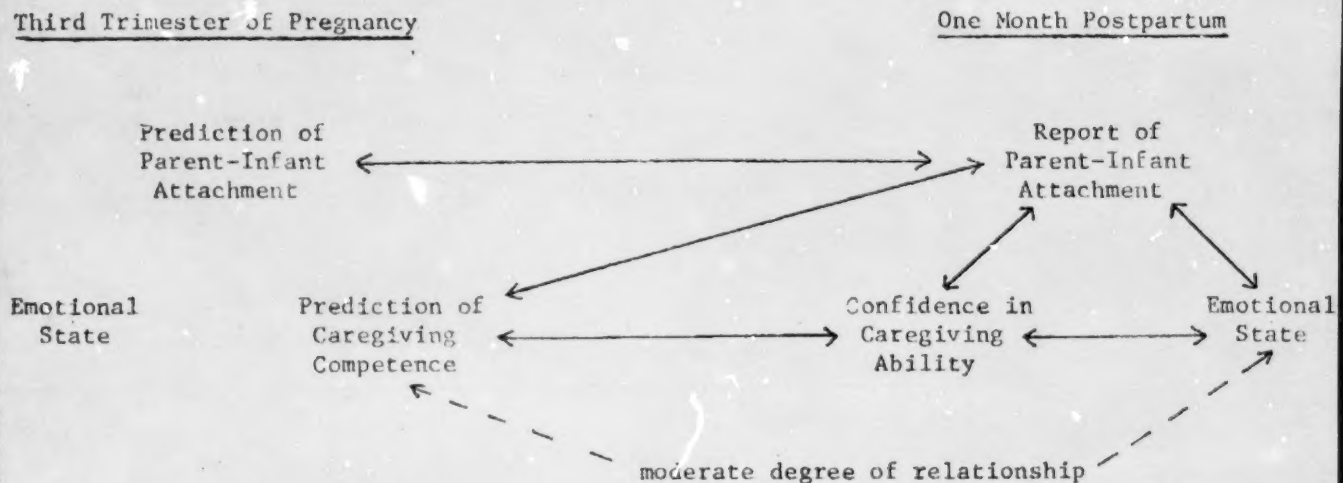
- questionnaires were completed by approximately 190 mothers, including the "core" sample.
- the 86 "core" mothers received a home visit which included one hour of observation of mother-infant interaction and completion by observer of maternal care rating scales.

E. Two to Twelve Months Postpartum

- follow-up questionnaires were completed by approximately 170 mothers, including the "core" sample.
-

Figure 1

Patterns of Relationships Among Constellations of Items Concerned with Attachment, Caregiving Competence and Emotional State Within and Between the Eighth Prenatal and One Month Postpartum Periods



Note: Arrows linking constellations of items indicate that the constellations are significantly inter-correlated. For example, prediction of caregiving confidence (prenatally) is significantly correlated with postpartum report of attachment but is not significantly correlated with prenatal prediction of attachment.

Table 2

Maternal Behaviour Composites

I. Physical Contact	=	sum of:	close contact loose contact on lap secure hold
II. Visual Engagement	=	sum of:	en face eye-to-eye
III. Vocal Engagement	=	sum of:	vocalize request response
IV. Tactile Engagement	=	sum of:	touch pat/stroke
V. Play Engagement	=	sum of:	smile play play face
VI. Provides Stimulation	=	sum of:	visual stimulation auditory stimulation tactile stimulation vestibular stimulation
VII. Affection	=	sum of:	kiss nickname name
VIII. Caregiving	=	sum of:	feed start feed mother stop feed caretake adjust
IX. Contingent Response	=	sum of:	all maternal behaviour recorded in response to infant behaviour

Maternal Rating Scales (0 pt. scales)
(from Mary D.S. Ainsworth)

A. General Attitude

1. Maternal perception of the infant
2. Maternal expression of delight in the infant
3. Maternal acceptance of the infant
4. Maternal attitude toward the infant as evidenced by her excellence as an informant

B. Feeding

1. Synchronization of maternal interventions with infant's rhythms
2. Determination of amount and end of feeding
3. Maternal synchronization of rate of feeding to infant's pace

Table
Maternal Rating Scales

- C. Availability and Interaction
 - 1. Maternal availability to infant
 - 2. Amount of interaction offered by mother
 - 3. Appropriateness of maternal initiations of interaction
- D. Physical Contact
 - 1. Amount of physical contact
 - 2. Quality of physical contact in holding infant
- E. Effectiveness of Maternal Response to Infant's Crying
- F. Social Contact
 - 1. Amount of visual contact
 - 2. Amount of auditory and vocal contact
 - 3. Frequency of play interaction
- G. Facilitation of Sensorimotor Development
 - 1. Stimulus potential of the Physical environment
 - 2. Maternal encouragement of achievement

DESCRIPTION OF PARENTING TEACHING SESSIONS
CONDUCTED IN THE HOME AT 12 DAYS POSTPARTUM

5

The information given to parents during the teaching visit was based on items outlined in the Neonatal Behavioral Assessment Scale (Brazelton, 1973). The potential for adapting some of the items for use in teaching parents about their infants had previously been recognized by nurses at the University of Washington working with Kathryn Barnard and a teaching tool or session had been developed and tested there (Ryan, 1974; Kang, 1975). On the basis of a pilot study in Vancouver the Washington approach was modified for the present study by Sheena Davidson to include information about general behaviour patterns of newborns with description and demonstration of the infant's individual response patterns. The items included were:

States

demonstration: alert state
discussion: sleep states, crying state

Reflexes

demonstration: startle, rooting, sucking, blinking, grasp
discussion: swallowing, gag, coughing, yawning and stepping

Behavioural Responses

demonstration: visual attention; listening attention, muscle tone;
cuddliness, consolability, defensive movements
discussion: smiling; hiccuping; tearing

Since the teaching session was designed to meet the specific needs of the parents involved there was flexibility in the presentation of the material. Parents were encouraged to ask questions so the time spent on the information varied. If the baby was awake, the behaviours were demonstrated while discussing general information. If the baby was asleep she/he was not picked up until the general discussion was completed. At that time the infant's reflexes, alert state and some interactive behaviours (response to visual and auditory stimuli; methods of consoling, defensive movements) were demonstrated.

The session typically began with a fairly detailed discussion about infant attention states, including four of the six states of consciousness described by Brazelton (light and deep sleep, alert and crying states). The discussion began with a description of the amount and type of sleep typical of the baby at his/her current stage of development and a discussion of the changes in patterns of sleep that could be expected to occur in the next few weeks. Questions from the parents reflected concerns about how to interpret infant behaviours during sleep and how to meet their baby's needs. For example, parents asked what type of physical environment was best for sleeping, whether the sucking motions made by their infant during sleep indicated hunger and whether it is normal for the baby to startle frequently during sleep. Several parents had noted irregular patterns of breathing during light sleep and some had been concerned about this phenomenon. In talking about the alert state the parents were asked if they had noticed periods when the infant appeared to be responsive to them or was looking either at them or some object close to them. Most parents had neither noticed nor expected this type of behaviour. A few parents had expected the baby to be able to focus but had been largely unsuccessful in their attempts to interact visually with their baby. It became apparent that parents often sit with their backs to the light (for example, on a sofa in front of a large picture window). Simply pointing out that perhaps the infant was unable to see their faces because of the large lighted area behind them and suggesting using a different chair or a less

bright room seemed to be one key to helping with this aspect of interaction.

The discussion next turned to other abilities and behaviours of interest during the alert state. For example, the type of visual and auditory stimuli most likely to attract the infant's attention were outlined. Usually parents asked several questions about the baby's eyes which included lack of muscular co-ordination, tearing or the lack of tearing; discharges from the eyes, the distance at which objects could be seen by infants most clearly and colour of the iris.

When parents had stopped asking questions about the infant's vision and hearing, patterns of alertness shown by the baby were usually discussed. Parents were asked if there was a time before bathing or after feeding when the baby usually was awake for a while. Most parents were aware of such an alert period. This was suggested as an optimal time during which to play with the baby. Some parents stated that they felt the baby was far too young for playing. It would be pointed out then that interactions offering opportunity for visual, auditory and tactile stimulation were a form of play. Discussion then focussed on examples of vestibular stimulation and muscular coordination while the infant was alert.

Parents were shown their infant's reaction to being placed prone. This served to demonstrate that the infant was capable of some degree of muscular coordination and capable of holding her/his head clear of the surface to maintain a clear airway. Some infants also seemed to enjoy this 'practising' of holding up the head. The baby was then placed on the nurse's lap and gently "pulled to sit". The parents watched to see (and feel) the amount of muscular resistance offered and the baby's effort to maintain his/her head in the mid line. Parents appeared to be surprised that their infants could do this even for short periods, and frequently the father repeated the "pull to sit" on his own initiative. The stepping reflex was typically demonstrated next and the baby's reactions to being held closely in order to "cuddle" or loosely in order to "look about" were discussed.

During the demonstration the infant would usually start to cry at one point or another. This served to initiate a discussion of crying behaviours and the variety of methods that can be used to soothe an infant (including, if all else fails, a drive in the car). The fact that some infants cannot always be soothed by parental resources, the amount of daily crying in the newborn period; changes in patterns of crying; and the difficulty of learning the meaning of infant crying were also discussed during this part of the teaching session. The parents were asked how they reacted to the baby's crying and in particular whether they had anticipated this reaction prior to the baby's birth. This seemed to be an important area of discussion. Frequently, several minutes were spent talking about feelings the parents had experienced since the baby's birth. Quite often, the nurse-teacher simply sat and listened until the husband and wife finished telling each other how they felt about these experiences. At other times, the couple together animatedly described their experiences to the nurse-teacher.

Often the discussion about feelings led into aspects of infant feeding which was the focus of much parental concern. This usually provided an opportunity to demonstrate the remaining reflexes and behaviours. The nurse-teacher either answered the parents questions about feeding and other topics, or referred them to appropriate sources for assistance with their problem.

Items Favouring the Experimental Group over the Control Group (i.e., mean for combined groups 1 & 2 > 3 & 4)

Items Favouring the Control over the Experimental Group (i.e., 3 & 4 > 1 & 2)

PRENATAL QUESTIONNAIRE ITEMS

Attachment

- Prediction of early father-infant attachment

Confidence in Caregiving

- Confidence in ability to calm baby
- Clear picture of what it will be like to have a baby
- Lack of concern for spoiling the baby

Emotional State

- energetic
- relaxed
- nappy
- positive feeling now about the pregnancy

Attachment

- Prediction of early mother-infant attachment
- Prediction of early infant-mother attachment
- Prediction of early infant-father attachment

Confidence in Caregiving

- Feeling prepared to care for infant
- Describing partner as feeling prepared to care for infant
- Feeling experienced with infants
- Believing baby will be able to express needs

Emotional State

- comfortable
- content
- elated

POSTPARTUM QUESTIONNAIRE ITEMS

Attachment

- report of close mother-infant attachment
- report of close infant-mother attachment
- report of close father-infant attachment
- feeling baby "really yours" sooner

Confidence in Caregiving

- confidence in caregiving
- partner participates more in caregiving
- partner more confident about caregiving
- feeding progressing smoothly
- finding it easier to quiet unhappy baby
- able to tell what baby wants

Emotional State

- relaxed
- happy
- comfortable
- content
- elated
- lack of fear for baby*
- responsiveness to infant's needs*
- low score on negative aspects of child-rearing*
- less intrapunitive*
- less ignoring*
- low irritability*
- less need for reassurance*
- less depression*

Attachment

- report of close infant-father attachment

Confidence in Caregiving

Emotional State

- energetic
- less extrapunitive*
- faster convalescence (recovery from childbirth)*

Items Favouring the Experimental Group over
the Control Group

Items Favouring the Control over the
Experimental Group

MATERNAL RATING SCALES^a

- | | |
|--|---|
| -mother's (m's) perception of baby (B) | |
| -mother's delight with baby | |
| -mother's acceptance of baby | |
| -mother's attitude to baby as evidenced by
her excellence as an informant | |
| -feeding: synchronization of M's interven-
tions with B's rhythms | -feeding: determination of amount and end
of feeding |
| -feeding: M's synchronization of rate of
feeding to B's pace | |
| -M's availability to B | |
| -amount of interaction offered by M | |
| -appropriateness of M's initiation of
interaction | |
| -quality of physical contact in holding B | -amount of physical contact |
| -effectiveness of M's response to B's crying | |
| -amount of visual contact (tie) | -amount of visual contact (tie) |
| -amount of auditory and vocal contact | |
| -frequency of play interaction | |
| -stimulus potential of the physical environ-
ment | |
| -M's encouragement of achievement | |

MATERNAL BEHAVIOUR COMPOSITES^a

- | | |
|-----------------------|-------------------|
| -visual engagement | -physical contact |
| -vocal engagement | |
| -tactile engagement | |
| -play engagement | |
| -provides stimulation | |
| -affection | |
| -caregiving behaviour | |
| -contingent response | |

Note: ^a Based on observations at one-month postpartum visit. The observer was blind to the family's group assignment for the experiment.

* Scale on the Schaefer-Mannheimer Postnatal Research Inventory.